

W1MA Repeater

Power Restoration Project

Feb 2024

A little bit of History of how the lines got there ...

To be filled in

What happened ...

To be filled in

The Birds Eye View


Yellow poles (P1-P6) are the ones installed by Steve's Company , are about 150 ft apart .
(P5 to P6 is about 135 feet) Eversource is responsible for P1 – the first “private” pole

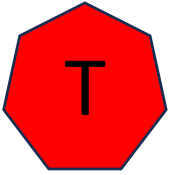


Red Poles are 14.4 KV along the street (Old Bass River Rd)

 This pole has the stepdown transformer 14.4 KV to 4 KV (yellow poles)

 This pole (P6) has the stepdown transformer 4KV to 240v

 This pole has the service entrance cable from P6 .. Going into the conduit that goes to the repeater shed



The Source – Pole on Old Bass River Rd.

Apparently a fuse stapled to the pole means .. DO NOT ENERGIZE

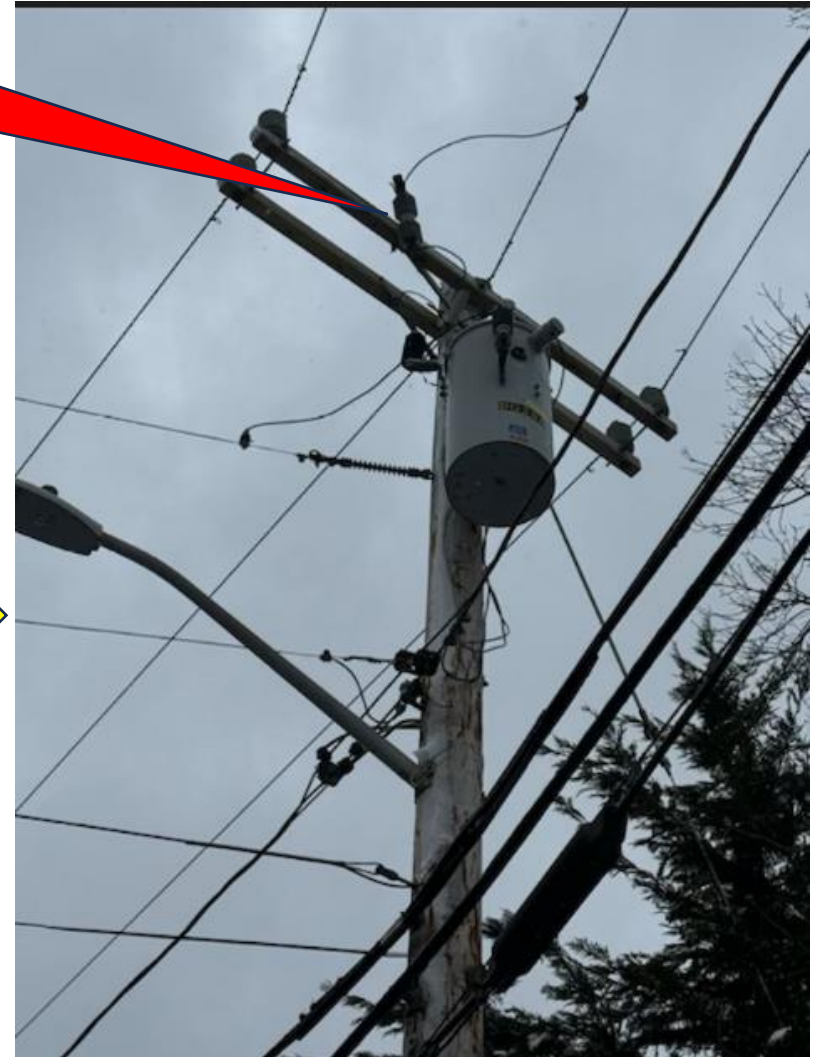


This is the fuse that blew .. Between the 14.4 KV line and the stepdown transformer.

This step down transformer is only serves our line

This is our "hot" 4KV line

This is our neutral 4KV line



P1 – The first Private Pole .. In Good Shape



Has an aluminum cross bar
with cross bar bracket.
We believe this pole is
managed by Eversource.



Between P1 and P2 ... Heavy Foliage ..



P2 – Notice “hot” side with bigger Insulator

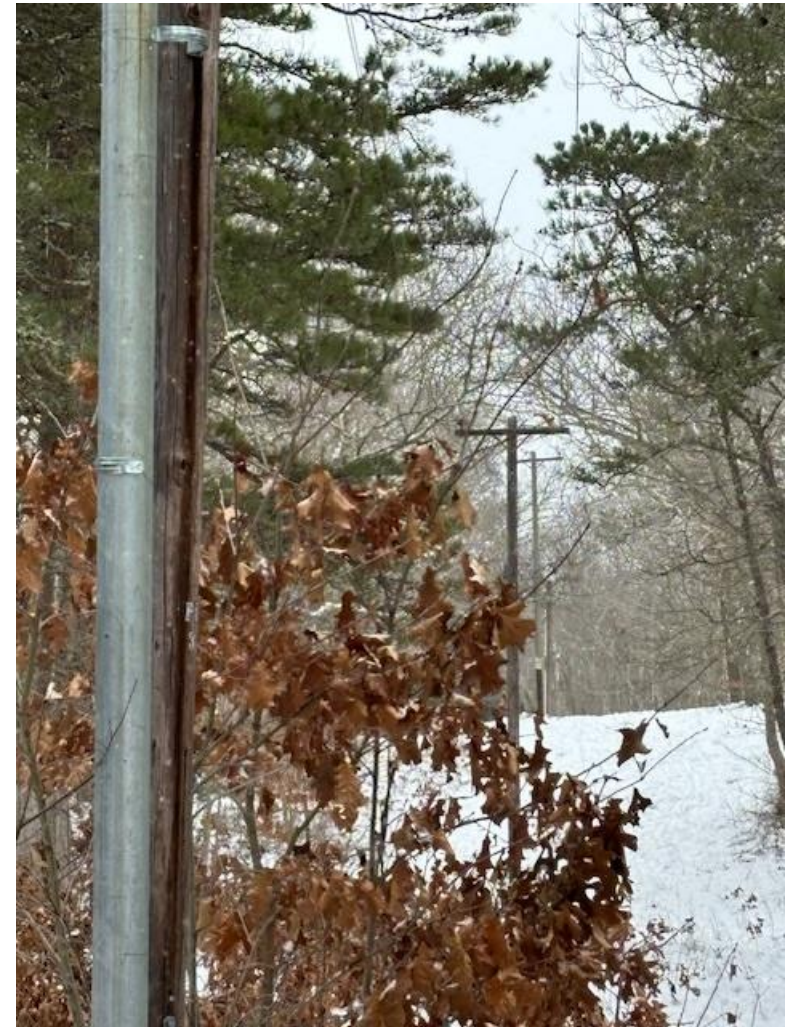
(pole does have vertical crack at top)



P3 – Across Hokum Rd



Note: Hot side – big insulator is on your left as you walk toward the repeater site.



Looking up the hill P3 (foreground), P4, P5

P4 – cross arm looks OK, neutral insulator loose / broke ?



The official marking was probably on the back ..I should have looked there first .. 😊



P5 – in bad shape



Hot wire resting on crossarm –
burn marks visible (did not show
in the picture)



P6 – 4KV to 240 Volt Step Down

Notice no fuse on the 4KV to the stepdown transformer – just what appears to be a lightning arrestor



There are two triplex lines going to the conduit pole (P7) .. One is very large gauge; one is much smaller – we are assuming ours is the smaller gauge triplex.



P7 – Conduit Pole – Service entrance to Site



You can see the heavier gauge triplex on the left .. And the lighter gauge on the right ..



The conduit from the pole comes up at the back of the repeater shed and comes into this meter.

Immediate – Short term plan – next 7 days...

Questions

1. Maintain power with generator until primary power is restored.
 1. Use Aux tank to extend generator runtime between fueling operations.
 2. Move the repeater controller's "AC Present" wall wart over to generator supply to indicate when tank needs to be refilled – repeater will report on battery ... when generator dies.
 3. Generator Refill Duty Volunteers ..
2. Any issues with 24x7 generator run time?
3. Permit required – assume yes
 1. Who do we apply to .. Who will make the application
4. Do we need to wait for snow cover to melt ?
5. Start lining up the re-pair team
 1. Qualified Electrician to replace insulators & cross arm
 2. Time frames ..

Initial list of things needing attention ...

Tasks

1. Replace crossarm and both insulators on P5
2. Replace neutral insulator on P4
3. Trim all the branches away from P6
4. Pruning along the entire run – assume nothing should be touching, or coming near to touching (when snow is on the branches) the 4 KV lines – especially between P2 and P3 (will need to work with home owner) - Power line easement?

Equipment Needed ...

1. 40 ft+ extension ladder ... or Man Lift ..



Baskins Ace Hardware
rental .. \$265 / day

Could this be towed up
the hill with Marks Dingo?

Supplies Needed

- Minimum 3 Insulators
- 4 x 4 cross beam and x braces
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